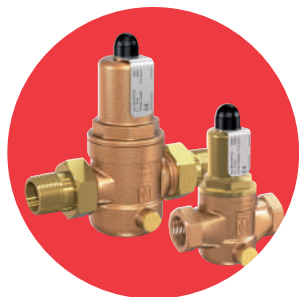




Art681M & Art681F

Gunmetal Pressure Reducing Valve



Features

- Suitable for neutral and non-neutral liquids, air, gases, vapours and warm water
- DIN EN 1567, ISO 3822, PED 2014/68/EU
- Marine approvals - GL, LR, EMEA, BV, ABS, RS
- ATEX approval available at extra cost
- 24 month warranty
- Test certificate to EN10204-3.1 available on request
- Available in PN25 and PN40



Technical data

Working temp: EPDM or FKM Seal
-10°C to +95°C

Standard Version

Max Inlet pressure: 40 Bar

Outlet pressure: 1 - 8 Bar

Low Pressure Version

Max Inlet pressure: 25 Bar

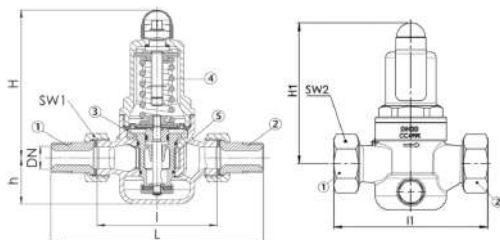
Outlet pressure: 0.5 - 2 Bar

High Pressure Version

Max Inlet pressure: 40 Bar

Outlet pressure: 5 - 15 Bar

See overleaf for additional information



N. Part Name Materials

1	Inlet body	Bronze / Gunmetal CC499K
2	Outlet body	Bronze / Gunmetal CC499K
3	Internal parts	Bronze / Gunmetal CC499K Stainless Steel 1.4404 (316)
4	Spring	Spring steel with anti-rust protection 1.1200 (EN10270-1)
5	Strainer	Stainless Steel 316

Connection	DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Connection M x M		✓	✓	✓	✓	✓	✓
Connection F x F		✓	✓	✓	X	X	X
Inlet pressure LP up to	bar	25	25	25	25	25	25
Outlet pressure LP	bar	0.5-2	0.5-2	0.5-2	0.5-2	0.5-2	0.5-2
Inlet pressure SP up to	bar	40	40	40	40	40	40
Outlet pressure SP	bar	1-8	1-8	1-8	1-8	1-8	1-8
Inlet pressure HP up to	bar	40	40	40	40	40	40
Outlet pressure HP	bar	5-15	5-15	5-15	5-15	5-15	5-15
Installation dimensions	L	142	158	180	193	226	252
in mm	I	80	90	100	105	130	140
	I1	85	95	105			
	H (H1)	102 (128")	102 (128")	130 (150")	130 (150")	165 (185")	165 (185")
	h	33	33	45	45	70	70
	SW1	30	37	46	52	65	75
	SW2	28	35	43	48	57	68
Weight	kg	1.2 (1.5")	1.3 (1.6")	2.4 (2.9")	2.6 (3.1")	5.5 (6.2")	6.0 (6.7")
Coefficient of flow kvs	m ³ /h	3	3.5	6.7	7.6	12.5	15

¹ for type 681mGFO-LP



Typical Applications

- Potable water supply
- Process water supply in industrial and building technology
- Fire-fighting equipment & sprinkler systems
- Shipbuilding industry and offshore plants
- Secondary areas in the food, pharmaceutical and cosmetics industries

Valve version

m	with diaphragm	High-quality, heat-resistant moulded elastomere, fabric-reinforced diaphragm.
		Pressure adjustment by means of non-rising spindle.
		Valve insert with balanced single seat valve completely made of stainless steel.

Complete valve insert SP/HP (order code: 681 Insert-DN...-seal) available as replacement part can be exchanged without removing the valve.

Complete valve insert LP (order code: 681 LP Insert-DN...-seal) available as replacement part can be exchanged without removing the valve.

Built-in dirt trap made of stainless steel.

Mesh DN 15 to DN 32 0,60 mm

size: DN 40 and DN 50 0,75 mm

Medium

GF	gaseous and liquid	for water and distilled water, neutral and non-sticking liquids, compressed air and neutral gases; optionally with FPM elastomere seals for non-neutral media i.e. oils, fuels, oil-laden compressed air etc.
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Type of lifting mechanism

O	without lifting device
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Outlet pressure ranges

SP	Standard version	Inlet pressure: up to 40 bar	Outlet pressure: from 1 to 8 bar
HP	High-pressure version	Inlet pressure: up to 40 bar	Outlet pressure: from 5 to 15 bar
LP	Low-pressure version	Inlet pressure: up to 25 bar	Outlet pressure: from 0,5 to 2 bar

Fixed setting at a required outlet pressure against surcharge.

Seat-Seal/Diaphragm Options

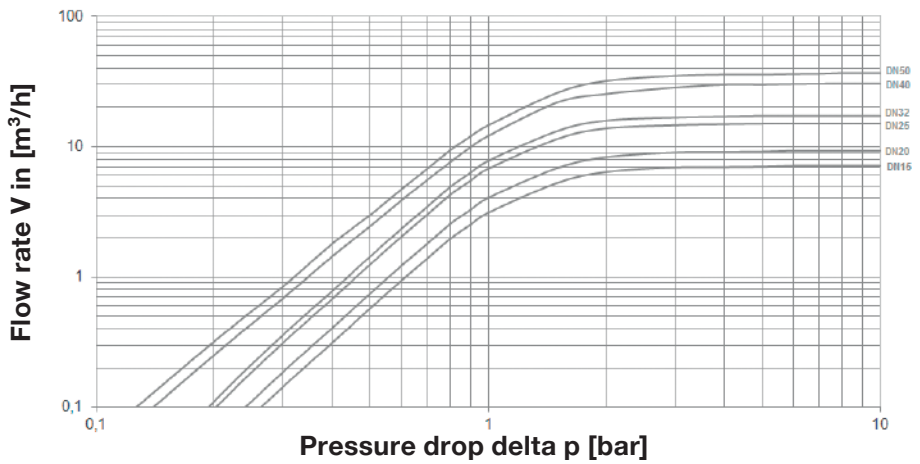
Option	Materials	Type	Working Temp.
EPDM	Ethylene propylene diene	Elastomere moulded diaphragm and seals approvals according to drinking water directive	-10°C to +95°C
Against surcharge			
FKM	Fluorocarbon	Elastomere moulded diaphragm and seals	-10°C to +95°C



Capacity Charts

Dimensioning by pressure loss on the outlet pressure side

Flow chart water





Dimensioning by flow velocity

For Liquids:

With help of the chart you can determine the nominal diameter (DN) for a given flow volume V (m^3/h). The ideal flow velocity is between $1\text{m/s} - 2\text{m/s}$.

For compressed air and other gaseous media:

The usual flow velocity for compressed air is $10 - 20\text{ m/s}$. For gaseous media the flow volume V should always be shown in actual cubic meters/hour.

If the flow volume is given in standard cubic meters, these should be converted into actual cubic meters before using the diagram.

$$V (\text{m}^3/\text{h}) = \frac{V_{\text{Norm}} (\text{Nm}^3/\text{h})}{p_{\text{absolut}} (\text{bar})} = \frac{V_{\text{Norm}}}{p_0 + 1}$$

Actual cubic meters are based on the prevailing pressure of the medium on the outlet side of the pressure reducer.

